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# CONTENTS

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|---|---|
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# EDITORIAL

Dear Readers,

Welcome to the first issue of the *Queensland Environment Practice Reporter* for 2011. I'm very pleased to present this special issue of the QEPR which addresses a range of topics associated with the generation and recognition of environmental offsets in Australia. This is an area of growing concern for land developers, regulators and legal advisors in Australia and this issue introduces some of the key principles and policy approaches to be addressed in the generation and recognition of credible environmental offsets.

*Part One* of this issue contains a series of papers, written by Adjunct Professor Hugh Lavery and his co-authors, addressing the key methodologies in the creation of appropriate environmental offsets in Queensland.

The first paper by Hugh Lavery provides an overview of the methods and techniques by which environmental benefits may be achieved from the use of offset land mitigation, particularly through enhanced private sector engagement.

The second paper, co-authored by Hugh Lavery and Michelle Gane, considers methods for the selection of sites for offsetting purposes. That paper presents the Wide Bay Burnett catchment region of South-East Queensland as a case study for the application of site selection technique to identify lands with environmental value to be recognised.

The third paper, also co-authored by Hugh Lavery and Michelle Gane, considers the issues associated with measuring the 'functional lift' or net environmental benefit from offsetting activities. This paper presents the Meridien Marina redevelopment at Horizon Shores as its case study for functional lift and highlights the potential benefits of establishing an environmental bank across the larger local area.

The final paper, by Hugh Lavery, Phil Jeston, Andy Williams and Michelle Gane, considers the functional lift of relocating contaminated soils from land and suggests that these benefits could be recognised, through credits or other incentives, under an enhanced environmental offset scheme. This paper considers these issues in the context of the rehabilitation of contaminated land, from tributyl tin deposits, at Boat Haven, Airlie Beach in Queensland.

*Part Two* of this issue continues the offsetting theme with a paper by John Haydon describing the work of the Environmental Law Roundtable of Australia and New Zealand (ELRANZ) and, in particular, the Biodiversity Offsets Project which was discussed at the recent National Environmental Law Annual Conference on 21 October 2010 in Canberra. A paper titled, 'Elements of an Environmental Offsets Policy (A Working Paper Towards a Policy for an Environmental Banking Scheme appropriate for Queensland)' was prepared by Michelle Gane and distributed to delegates for consideration prior to the interactive workshops at that conference. That working paper by Michelle Gane is also contained in this special issue to assist in continuing the dialogue on the best way forward. Anyone with comments in relation to the ELRANZ project generally, or the

working paper in particular, can contact John Haydon johnhaydon@ecodirections.com or Michelle Gane m.gane@qut.edu.au.

As usual, this issue also contains the valuable summaries of the decisions of the Queensland Planning and Environment Court and Court of Appeal by Michael Walton and Ben Job.

My thanks go to Anne Overell for her excellent editorial work in 2010 and to QELA for their ongoing assistance in bringing the QEPR to our readers.

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# 6. Elements of an Environmental Offsets Policy: A Working Paper Towards a Policy for an Environmental Banking Scheme appropriate for Queensland

***By Michelle Gane***

In the past eight years, Australia has adopted the use of environmental offsets as a means to compensate for environmental degradation from development. Queensland has more environmental offsetting policies than any other Australian State or Territory. The methodology has profound effects on development companies, landowners (both private and public), regional land planning, organizations, government agencies, monetary banking institutions and environmental conservation bodies.

First it was the *Mitigation and Compensation for Works or Activities Causing Marine Fish Habitat Loss* in 2002. There was a short pause and the offset snowballed with the *Offsets for Net Benefit to Koalas and Koala Habitat* 2006; *Policy for Vegetation Management Offsets* 2007 and then the overarching *Queensland Government Environmental Offsets Policy* 2008. Not to be outdone the local authorities soon climbed aboard the offset bandwagon with offsets required under the *South East Queensland Regional Plan 2009–2031*. Other local government authorities are also currently developing their offset policies. And conservation groups in north Queensland are setting up voluntary offset policies for significant species such as the cassowary.

Environmental banking involves actions taken to provide compensation ***in advance*** for the unavoidable (or inevitable) environmental losses that will occur as a consequence of future developmental activities.

For many years, the Australian environmental movement has been preoccupied with ownership of land rather than with land management. This approach has proved to be unsuccessful simply because the majority of land with high biodiversity value is privately owned. With the rise of sustainable development as well as climate change concerns, the approach to environmental issues must now be centred on management.

Currently environmental assets on private lands are regulated by command-and-control legislation that restricts activities and requires the individual to bear the land cost. A new approach to environmental protection is needed to engage the private sector actively in land management. An approach that provides incentives for landowners to protect and manage environmental lands in perpetuity is imperative, and indeed long overdue.

As proved elsewhere, Environmental Banking programs are highly effective in protecting land with high conservation values, particularly lands in private ownership, ensuring adequate financial provision is available to protect and manage in the long-term. This working paper proposes an environmental banking policy that aims to address these oversights.

**Preamble**

1. A proliferation of official policies throughout Australia about environmental offsetting to compensate for development (in all forms) focuses on Crown-managed lands or on command-and-control regulation over other land. Some 79% of land in Australia (96% in Queensland) is under private management.[1] The absence of financial incentive discourages

[1] See Australian Collaborative Land Use Mapping Programme, *Australian Land Use*, <http://adl.brs.gov.au/mapserv/landuse/index.cfm?fa=acl.aclump&tab=aclump>; 'Land use – land use in

this sector from participating in conservation management, despite the comparative natural fertility of these landholdings, its potential to fund and manage on site over the long term, and its capacity to generate beneficial rural enterprise. A new policy is vital in order to redress this.

**Part 1 Environmental sustainability**

2. The purpose of this proposal is to offer an environmental offsets scheme that encourages and facilitates natural sustainability through an environmental banking program.
3. A new policy needs to be created with the aim of acquiring suitable offset lands and approving these as Environmental Banks[2]. All developments (public and private) would be subject to this policy.
4. The policy would require that unavoidable environmental losses which occur as a consequence of development activities provide environmental compensation **in-advance** of the development taking place. (Offsetting will not be considered until all appropriate and practicable steps have been taken first to avoid and then to minimize adverse impacts on the environment.)
5. Regulations governing such offsets - providing the necessary incentive for private sector and third party involvement - will be mandatory for Environmental Banking.
6. Such environmental offsets can be aggregated into Environmental Banks.

**Part 2 Environmental Banking**

7. Environmental Banking involves actions that provide compensation **in-advance** for the unavoidable (or inevitable) environmental losses that will occur as a consequence of future developmental activities. The aim of Environmental Banking is to replace the physical and biological functions and human-use values of the environment which are unavoidably lost as a consequence of land development. An area used to offset, compensate or mitigate adverse and unavoidable environmental impacts from development is deemed to be an Environmental Bank. The fundamental mechanism for an Environmental Bank is the financial incentive it offers, imperative if private landholders are realistically to be engaged.
8. An Environmental Bank is defined as '*an area developed and managed for its resources values. It may be a mosaic of properties or a single large parcel of land. Within the Bank, critical ecosystem functions are restored, created, enhanced, or preserved for the purpose of compensating for impacts to similar resources elsewhere*'.
9. The specific natural resource characteristics or values of the Environmental Bank are termed **'**Credits**'.**[3] The Credits produced in a Bank can be bought or sold on the open market. The catchment (or 'service area') refers to the geographic area or areas within which Credits can be bought or sold.
10. Because developers are unlikely to be specialists in environmental restoration, specialists may be engaged in the management process. An Environmental Bank created by such specialists allows property developers to purchase Credits to fulfill their offsetting needs, positioning them as a 'Bank customers'.

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Queensland', in *Australian Natural Resources Atlas*, <http://www.anra.gov.au/topics/land/landuse/qld/> (25 May 2009).

[2] An Environmental Bank is a site, or suite of sites, where natural resources are restored, established, enhanced and/or preserved for the purpose of providing offsets for projects authorized by development approvals. In general, an environmental bank sells Credits to developers whose obligation to provide offsets is then transferred to the bank sponsor. The operation and use of an Environmental Bank is governed by an Environmental Banking Instrument.

[3] Credit means a unit of measure (e.g. a function or area measure or other suitable metric) representing the accrual of ecosystem functions at an offset site. Debit means a unit of measure (e.g.. a function or area measure or other suitable metric) representing the loss of ecosystem functions at the project site.

11. A 'Bank Sponsor'[4] is an individual or body corporate that establishes an Environmental Bank.
12. An Environmental Bank must be approved by the appropriate regulatory agencies prior to selling Credits. The number of Credits that an Environmental Bank can receive is linked to the area and type of environment and is part of the certification process. The Bank must meet specified key environmental performance criteria before the number of Credits are assigned (independently by the controlling agencies) to the Bank.
13. Not only do Environmental Banks consolidate offsets (where ecologically appropriate) but they also consolidate resources, provide financial planning and scientific expertise (which is often not practical for Developer-managed offsets projects), reduce temporal loss of environmental functions and diminish uncertainty over project success.
14. Environmental Banking has several components that make it a unique market-based program. These include consolidating smaller offset projects into large ecological units, providing a net ecological gain prior to the development occurring, and allowing private companies to profit from the sale of Environmental Bank Credits.

**Part 3 Guiding principles**

15. All Environmental Banks and offset projects must use a catchment-wide approach in order to establish the most effective site for a Bank. The catchment approach must consider the strategic importance of the landscape position and the resource type of the Environmental Bank.
16. The amount of offset requirement must be sufficient, to the greatest extent practicable, to replace the lost resource functions. The regulations must insist on a ratio greater than one-for-one.
17. All offset projects must, as part of their long-term management plan, provide a non-wasting Endowment Fund[5] to provide for the long-term management of the offset land.
18. Some Environmental Bank Credits can be sold prior to the Environmental Bank being completed, in order to allow the Bank Sponsor to fund the restoration work.

**Part 4 The policy elements**

19. Environmental offsets are actions taken to offset unavoidable adverse impacts on the environment as a result of a development application. Offsets are not considered an option until all appropriate and practicable steps have been taken to first avoid and then minimize adverse impacts to the environment.
20. (1) Avoid - The applicant must demonstrate that the impacts cannot be avoided and there is no practicable alternative having less adverse impact.
    (2) Minimise - If the impacts cannot be avoided, the impacts must be minimized to the greatest extent possible (including any project modifications).
    (3) Compensate – If avoidance and minimization have been fully explored and demonstrated, appropriate and practicable offsets are required for any unavoidable adverse impacts that remain.

[4] Bank Sponsor means any public or private entity responsible for establishing and operating an environmental bank.
[5] Endowment Fund means a long term financing mechanisms that can include non-wasting endowments, trusts, contractual arrangements with future responsible parties, and other appropriate financial instruments.

21. There are two alternative **mechanisms** for providing offsets:
    (1) Developer-responsible offsets[6]; and
    (2) In-lieu fee offsets[7] (ILF).

    In private sector conditions, these lack the security of delivery of Environmental Banks.
22. Offsets can be carried out by four **methods**:
    (1) Preservation of an existing ecosystem.
    (2) Establishment (or creation) of new ecosystem;
    (3) Enhancement of existing ecosystem function; or
    (4) Restoration (rehabilitation or re-establishment) of a previously existing ecosystem.
23. An Environmental Banks is most likely to address (4) because of greater inherent 'functional lift', while the Crown is most likely to address (1) using other schemes.
24. An offset hierarchy has been established for determining the most appropriate method of providing the offset. The priority is to ensure ecological success of the offset not the source of offset:
    (1) Credits from a Environmental Bank;
    (2) Credits from an in-lieu fee program;
    (3) Developer-managed offset using a catchment approach;
    (4) Developer-managed offset on-site;
    (5) Developer-managed offset off-site.
25. The Regulating Agency determines and/or approves what offset is required for a Development Approval (DA). The amount and type of offset required will be clearly stated in the special conditions section of the DA. DA applicants are responsible for proposing the most appropriate offset option based on the three available mechanisms. The conditions are subject to appeal rights.
26. A developer-managed offset occurs when the developer (DA applicant) retains the responsibility for ensuring that the offset requirements are completed and successful. Environmental Banking and in-lieu fees are generally conducted by a third-party. Initially, the developer is legally responsible for satisfying DA conditions relating to offsets (though the legal responsibility can vary depending on the offsetting option selected). Environmental banking and the sale of credits take some precedent from the concept of Transferrable Development Rights.

**Developer-managed offsets**

27. Developer-managed offset occurs when the developer undertakes to implement the offset requirements themselves. Offsets can be undertaken by any of the four methods (restoration, enhancement, establishment or preservation of aquatic resources). This can be done by the developer or by hiring another party to undertake the offset.
28. The developer also has the option of establishing his/her own Environmental Bank (Developer-managed Environmental Bank). In either instance, the developer is legally obligated for the implementation and success of the offset.

**Environmental Banks and In-lieu fee programs**

29. The developer has the option of satisfying his/her offset requirements by obtaining Credits from an Environmental Bank or ILF program. These are generally conducted by a third party (except for Developer-managed Environmental Banks).

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[6] Developer managed offset means an environmental restoration, establishment, enhancement and/or preservation activity undertaken by the Developer to provide the offset for which the Developer retains full responsibility.

[7] In-lieu fee offset means a program involving the restoration, enhancement, establishment and/or preservation of the environment through funds paid to a governmental or non-profit natural resources management entity to satisfy offset requirements.

30. The conditions of the DA will include the general requirements mentioned above as well as:
    (1) Specifying the number and type of Credits that need to be secured; and
    (2) Naming the Environmental Bank supplying the Credits.

    This section of the DA is flexible to allow the developer several options in obtaining the most appropriate Credits for their needs.
31. The developer proposes an Environmental Bank (or Banks) that will provide the required offsets. The Regulating Agency must approve that the Environmental Bank Credits are appropriate to meet the offset requirement - prior to issuing the DA. It is in the interest of the developer to receive approval for the Credits prior to securing these because they may not meet the offset requirements if additional or Credits of a different type is required. The Regulating Agency will maintain a publicly-available database of all approved Environmental Banks, plus the number of Credits available. The sale price of the Credit is a matter solely between the Developer and the Environmental Bank.
32. The Regulating Agency's assessment of offset value lies in a standardized unified view of the ecosystems under its control. In Queensland, this takes the form of the State's Regional Ecosystem mapping and evaluation scheme[8]. Value then is expressed in terms of resource scarcity, as a ratio of development site to proposed offset, and represents ecological 'functional lift'.
33. Once the purchase of the Credits has been approved the legal responsibility for those offsets passes from the developer to the Environmental Bank, with the Environmental Bank thereafter legally responsible for the in-perpetuity management of the offset land.

**Mitigation Plan**

34. All offset projects must prepare a Mitigation Plan. (This applies also to Developer-managed offsets and In-lieu fee programs. The final Mitigation Plan must include the following fundamental subjects:
    (1) Project objectives;
    (2) Site selection factors;
    (3) Site protection instrument;
    (4) Baseline information (at impact site and compensation site);
    (5) Credit determination methodology;
    (6) Mitigation work plan;
    (7) Maintenance plan;
    (8) Performance standards;
    (9) Monitoring requirements;
    (10) Long-term ecological management plan;
    (11) Adaptive management plan;
    (12) Financial assurances; and
    (13) Any other information required.

**Environmental Bank permit**

35. All Environmental Banks must have an Environmental Banking Instrument (EBI) approved by the Regulating Agency. This is the Environmental Bank Permit.
36. The Regulating Agency will establish an Interagency Review Team (IRT) consisting of relevant (State and local) government agencies. The role of the IRT is to review the establishment of Environmental Banks (and ILF programs) through the development of banking documentation.
37. Prior to the EBI being approved, the developer must submit a Prospectus.

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[8] See VJ Neldner, et al, *Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland*, (Version 3.1, Unpublished report, Queensland Herbarium, Department of Primary Industries, 2005).

**Prospectus**

38. The Prospectus provides an overview of the proposed Environmental Bank and must contain the following
    (1) The objectives of the Environmental Bank;
    (2) How the Environmental Bank will be established and operated;
    (3) The proposed 'service area';
    (4) An assessment of the technical feasibility of the proposed Bank;
    (5) The proposed ownership arrangements and long-term management strategy;
    (6) Qualifications of the sponsor to successfully complete the type of mitigation work proposed;
    (7) Ecological suitability of the site in relation to the objectives of the Bank, considering the:
        a. Physical characteristics;
        b. Chemical characteristics; and
        c. Biological characteristics.
39. The prospectus is subject to Public Notice and reviewed by the IRT. The IRT determines whether the Bank should proceed. If the Bank is to proceed, the Bank Sponsor must then prepare an EBI.

**Environmental Banking Instrument**

40. The EBI must include the following:
    (1) A description of geographic service area;
    (2) Appropriate accounting procedures;
    (3) A provision stating that the legal responsibility for providing the offsets lies with the Bank Sponsor when the developer secures Credits from the Environmental Bank Sponsor;
    (4) A default and closure provision;
    (5) The reporting protocols;
    (6) Any other information deemed necessary by the Regulating Agency;
    (7) A Mitigation Plan (incorporating the 13 subjects above); and
    (8) A Credit Release Schedule attached to the achievement of specific milestones.

**Environmental Bank Credits**

41. The Regulating Agency determines the number and type of offsets needed to fulfil the offset requirement of the Development Approval (see (31) above). The developer (holder of the DA) may nominate a particular Environmental Bank to provide the offset required by the DA.
42. The Environmental Bank must provide the developer with a statement of Credit availability. The Regulatory Agency reviews the developer's offset proposal and notifies of the acceptability of using those Environmental Bank Credits to meet the offset requirements.

**Credit release schedule**

43. A Credit release schedule must be approved by the Regulating Agency prior to the Credits being released for sale. The Environmental Bank must submit documentation to the Regulating Agency that the specific milestones have been achieved and request to have the Credits released.
44. The Environmental Bank Instrument may allow for early Credit release, as a percentage of the total Credits predicated at Bank maturity.

Example of a Credit release schedule for an Environmental Bank (method: creation)

The Creation Credits will be released per the following schedule:

- 15% of the total Credits due upon the Bank Establishment Date
- 25% of the total Credits upon submission of the as-built drawings
- 15% of the total Credits upon attainment of year two performance criteria
- 15% of the total Credits upon attainment of year three (ecological) performance criteria
- 15% of the total Credits upon attainment of year four (ecological) performance criteria
- All remaining credits upon attainment of year five (ecological) performance criteria.

Example of a Credit release schedule for an Environmental Bank (method: preservation)

The Preservation Credits will be released per the following schedule:

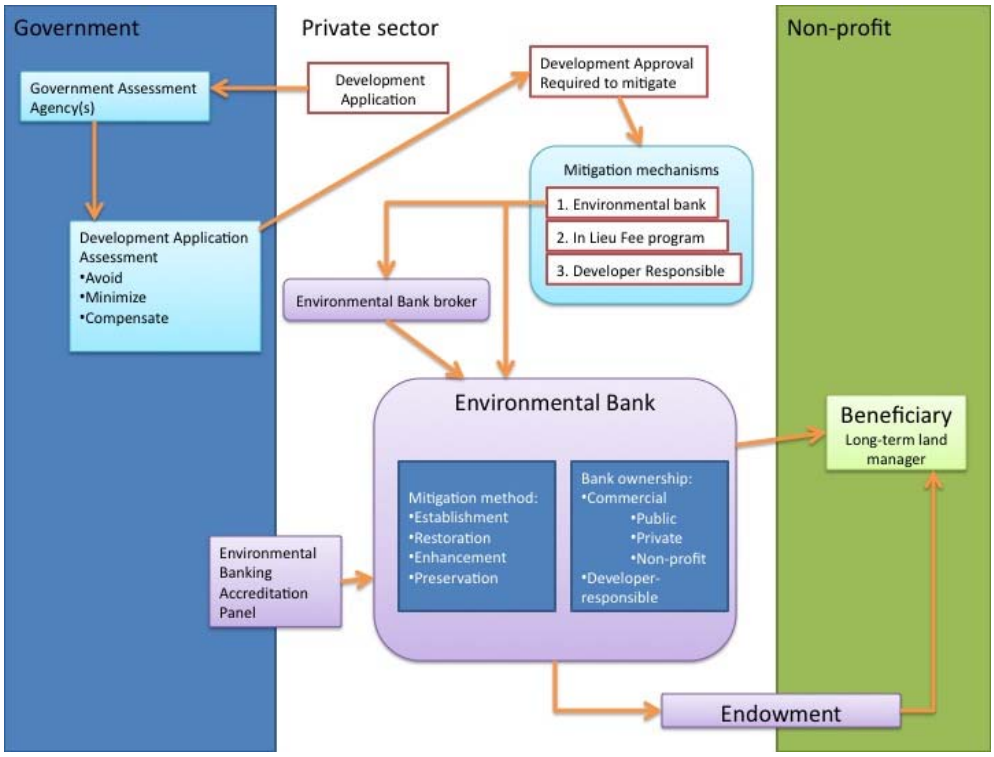
- 15% of the total Credits due upon the Bank Establishment Date
- 25% of the total Credits upon funding a minimum of 15% of the endowment fund
- 15% of the total Credits upon funding a minimum of 40% of the endowment fund
- 15% of the total Credits upon funding a minimum of 70% of the endowment fund
- The remaining Credits upon full funding of the endowment fund

**Bank closure**

45. When the Environmental Bank has sold all its Credits and met its performance criteria, the Bank is closed. In the EBI, the Bank Sponsor may nominate a beneficiary who will become the long-term land managers. These may be a not-for-profit organization (such as The Nature Conservancy, Greening Australia, Conservation Volunteers Australia) which will also receive the non-wasting Endowment Fund as a means to manage the land in perpetuity (nominally 30 years).

## Part 5 Organization

46. The above Environmental Banking scheme can be summarised in the diagram below.




***Michelle Gane***